

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 2

## **AMENDMENTS TO THE CLAIMS**

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled. The listing of claims will replace all prior versions, and listing of claims in the application.

### **Listing of Claims**

1. **(Currently Amended)** A method comprising:

estimating at least one of a first parameter, a second parameter and a third parameter, the first parameter related to a data packet being protected using a first protection mechanism, the second parameter related to the data packet being protected using a second protection mechanism, and the third parameter related to the data packet not being protected; and

selecting if to modulate a data packet using a first modulation type and to protect said data packet using a first protection mechanism, to modulate said data packet using said first modulation type and to protect said data packet using a second protection mechanism, or to modulate said data packet using a second modulation type, selecting one of at least the first and the second protection mechanisms to protect said data packet based on a predetermined criterion related to a successful transmission of said data packet that uses one or more of the parameters.

2. (Cancelled)

3. **(Currently Amended)** The method of claim [[1]] 5, wherein said first modulation type comprises orthogonal frequency division multiplexing, and wherein said second modulation type comprises direct sequence spread spectrum/complementary code keying.

4. (Original) The method of claim 1, wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 3

second protection mechanism comprises a clear-to-send-to-self protection mechanism.

**5. (Currently Amended)** The method of claim 1 wherein selecting comprises selecting

to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism,

to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism, or

to modulate said data packet using a second modulation type, comprising estimating at least one of a first parameter related to said data packet being protected using said first protection mechanism, a second parameter related to said data packet being protected using said second protection mechanism, and a third parameter related to said data packet not being protected, wherein said criterion relates to one or more of said parameters.

**6. (Currently Amended)** The method of claim 1 [[5]], wherein at least one of said parameters is a time period for successful transmission of said data packet.

**7. (Currently Amended)** The method of claim 1 [[5]], wherein at least one of said parameters is a power consumption for successful transmission of said data packet.

**8. (Currently Amended)** The method of claim 1 [[5]], wherein estimating comprises estimating at least one of said parameters based on one or more of a length of said data packet, a collision probability, a rate of a first modulation type, and a rate of a second modulation type.

**9. (Currently Amended)** The method of claim 1 [[5]], wherein selecting based on said predetermined criterion comprises comparing between at least two of said first, second and third parameters.

**10. (Currently Amended)** The method of claim 1 [[5]] comprising:

selecting to protect said data packet using said first protection mechanism if said third parameter is greater than said second parameter and said first parameter is smaller than said second parameter; and

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 4

selecting to protect said data packet using said second protection mechanism if said first and third parameters are greater than said second parameter.

11. (**Currently Amended**) The method of claim 1 [[5]] comprising selecting not to protect said data packet if said third parameter is smaller than said first and second parameters.

12. (**Currently Amended**) An apparatus comprising a controller able to estimate at least one of a first parameter, a second parameter and a third parameter, the first parameter related to a data packet being protected using a first protection mechanism, the second parameter related to the data packet being protected using a second protection mechanism, and the third parameter related to the data packet not being protected and to select if to modulate a data packet using a first modulation type and to protect said data packet using a first protection mechanism, to modulate said data packet using said first modulation type and to protect said data packet using a second protection mechanism, or to modulate said data packet using a second modulation type, one of at least the first and the second protection mechanisms to protect said data packet based on a predetermined criterion related to a successful transmission of said data packet that uses one or more of the parameters.

13. (Cancelled)

14. (**Currently Amended**) The apparatus of claim [[12]] 16, wherein said first modulation type comprises orthogonal frequency division multiplexing, and wherein said second modulation type comprises direct sequence spread spectrum/complementary code keying.

15. (Original) The apparatus of claim 12, wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said second protection mechanism comprises a clear-to-send-to-self protection mechanism.

16. (**Currently Amended**) The apparatus of claim 12, wherein said controller is able to select

to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism,

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 5

to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism, or

to modulate said data packet using a second modulation type

~~estimate at least one of a first parameter related to said data packet being protected using said first protection mechanism, a second parameter related to said data packet being protected using said second protection mechanism, and a third parameter related to said data packet not being protected, wherein said criterion relates to one or more of said parameters.~~

17. **(Currently Amended)** The apparatus of claim [[16]] 12, wherein said controller is able to estimate at least one of said parameters based on one or more of a length of said data packet, a collision probability, a rate of a first modulation type, and a rate of a second modulation type.

18. **(Currently Amended)** The apparatus of claim [[16]] 12, wherein at least one of said parameters is a time period for successful transmission of said data packet.

19. **(Currently Amended)** The apparatus of claim [[16]] 12, wherein at least one of said parameters is a power consumption for successful transmission of said data packet.

20. **(Currently Amended)** The apparatus of claim [[16]] 12, wherein said controller is able to compare between at least two of said first, second and third parameters.

21. **(Currently Amended)** The apparatus of claim [[16]] 12, wherein said controller is able to:

select to protect said data packet using said first protection mechanism if said third parameter is greater than said second parameter and said first parameter is smaller than said second parameter; and

select to protect said data packet using said second protection mechanism if said first and third parameters are greater than said second parameter.

22. **(Currently Amended)** A wireless device comprising:

a controller able to estimate at least one of a first parameter, a second parameter and a third parameter, the first parameter related to a data packet

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 6

being protected using a first protection mechanism, the second parameter related to the data packet being protected using a second protection mechanism, and the third parameter related to the data packet not being protected and to select if to modulate a data packet using a first modulation type and to protect said data packet using a first protection mechanism, to modulate said data packet using said first modulation type and to protect said data packet using a second protection mechanism, or to modulate said data packet using a second modulation type, one of at least the first and the second protection mechanisms to protect said data packet based on a predetermined criterion related to a successful transmission of said data packet that uses one or more of the parameters; and

one or more omni-directional antennas able to transmit said data packet.

23. (Cancelled)

24. (Original) The wireless device of claim 22, wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said second protection mechanism comprises a clear-to send-to-self protection mechanism.

25. (**Currently Amended**) The wireless device of claim 22, wherein said controller is able to select

to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism,

to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism, or

to modulate said data packet using a second modulation type  
estimate at least one of a first parameter related to said data packet being protected using said first protection mechanism, a second parameter related to said data packet being protected using said second protection mechanism, and a third parameter related to said data packet not being protected, wherein said criterion relates to one or more of said parameters.

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 7

26. **(Currently Amended)** The wireless device of claim [[25]] 22, wherein said controller is able to compare between at least two of said first, second and third parameters.

27. **(Currently Amended)** The wireless device of claim [[25]] 22, wherein at least one of said parameters is a time period for successful transmission of said data packet.

28. **(Currently Amended)** The wireless device of claim [[25]] 22, wherein at least one of said parameters is a power consumption for successful transmission of said data packet.

29. **(Currently Amended)** A system comprising:

a first communication device comprising:

a controller able to estimate at least one of a first parameter, a second parameter and a third parameter, the first parameter related to a data packet being protected using a first protection mechanism, the second parameter related to the data packet being protected using a second protection mechanism, and the third parameter related to the data packet not being protected and to select if to modulate a data packet using a first modulation type and to protect said data packet using a first protection mechanism, to modulate said data packet using said first modulation type and to protect said data packet using a second protection mechanism, or to modulate said data packet using a second modulation type, one of at least the first and the second protection mechanisms to protect said data packet based on a predetermined criterion related to a successful transmission of said data packet, that uses one or more of the parameters; and

one or more antennas able to transmit said data packet; and

a second communication device able to receive one or more data packets transmitted by said first device.

30. **(Currently Amended)** The system of claim 29, wherein said controller is able to select

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 8

to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism,

to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism, or

to modulate said data packet using a second modulation type

~~estimate at least one of a first parameter related to said data packet being protected using said first protection mechanism, a second parameter related to said data packet being protected using said second protection mechanism, and a third parameter related to said data packet not being protected, wherein said criterion relates to one or more of said parameters.~~

31. **(Currently Amended)** The system of claim [[30]] 29, wherein at least one of said parameters is a time period for successful transmission of said data packet.

32. **(Currently Amended)** A program storage device having instructions readable by a machine that when executed by the machine result in:

estimating at least one of a first parameter, a second parameter and a third parameter, the first parameter related to a data packet being protected using a first protection mechanism, the second parameter related to the data packet being protected using a second protection mechanism, and the third parameter related to the data packet not being protected; and

~~selecting if to modulate a data packet using a first modulation type and to protect said data packet using a first protection mechanism, to modulate said data packet using said first modulation type and to protect said data packet using a second protection mechanism, or to modulate said data packet using a second modulation type,~~

selecting one of at least the first and the second protection mechanisms to protect said data packet based on a predetermined criterion related to a successful transmission of said data packet that uses one or more of the parameters.

33. (Cancelled)

APPLICANT(S): GINZBURG, Boris et al.

SERIAL NO.: 10/810,687

FILED: March 29, 2004

Page 9

34. (**Currently Amended**) The program storage device of claim 32, wherein said instructions result in selecting

to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism,

to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism, or

to modulate said data packet using a second modulation type

~~estimating at least one of a first parameter related to said data packet being protected using said first protection mechanism, a second parameter related to said data packet being protected using said second protection mechanism, and a third parameter related to said data packet not being protected, wherein said criterion relates to one or more of said parameters.~~

35. (**Currently Amended**) The program storage device of claim [[34]] 32, wherein the instructions resulting in selecting based on said predetermined criterion result in comparing between at least two of said first, second and third parameters.